

CHARLESTON AREA  
STORMWATER  
**POND MANAGEMENT  
CONFERENCE**

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# PLANNING FOR INSPECTION AND MAINTENANCE

BY  
**CHUCK JARMAN, PE**  
WATER RESOURCES ENGINEER  
CLEMSON COOPERATIVE EXTENSION



# Why Inspection and Maintenance?

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Why are we inspecting?

What to inspect

How to prepare

How to document

Maintenance!!!



# IS THIS YOUR POND?





# IS THIS YOUR POND?





## *What should an inspection accomplish?*

- Provide documentation and assessment of the existing condition of the pond
- Provide complete and accurate documentation
- Identify deficiencies and maintenance needs
  - Short Term
  - Long Term
- Produce a clear, concise, and useful documentation of the findings





## *Preparation is an essential part of an inspection*

- Research the site
- Inspection equipment (safety)
- Current conditions awareness
- Know how you intend to document (checksheets, photos, etc.)





*Document with pictures*  
*They add clarity*



Outfall Structure



Look Inside



Trash rack



*Expect the un-expected*  
*Be prepared*



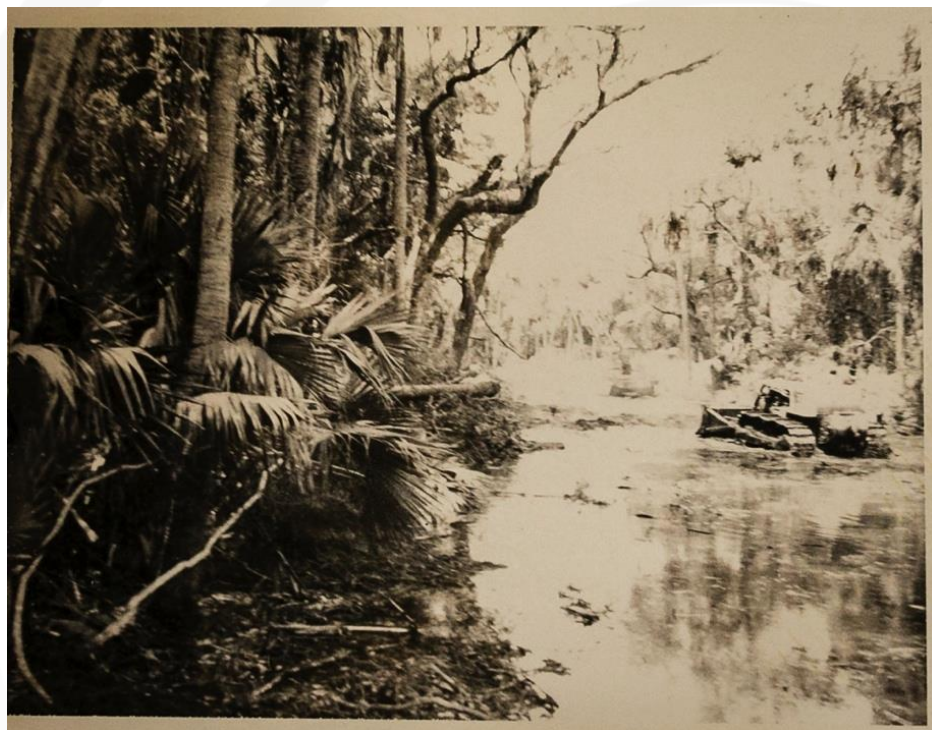


## *Research site information*

Create a file that includes

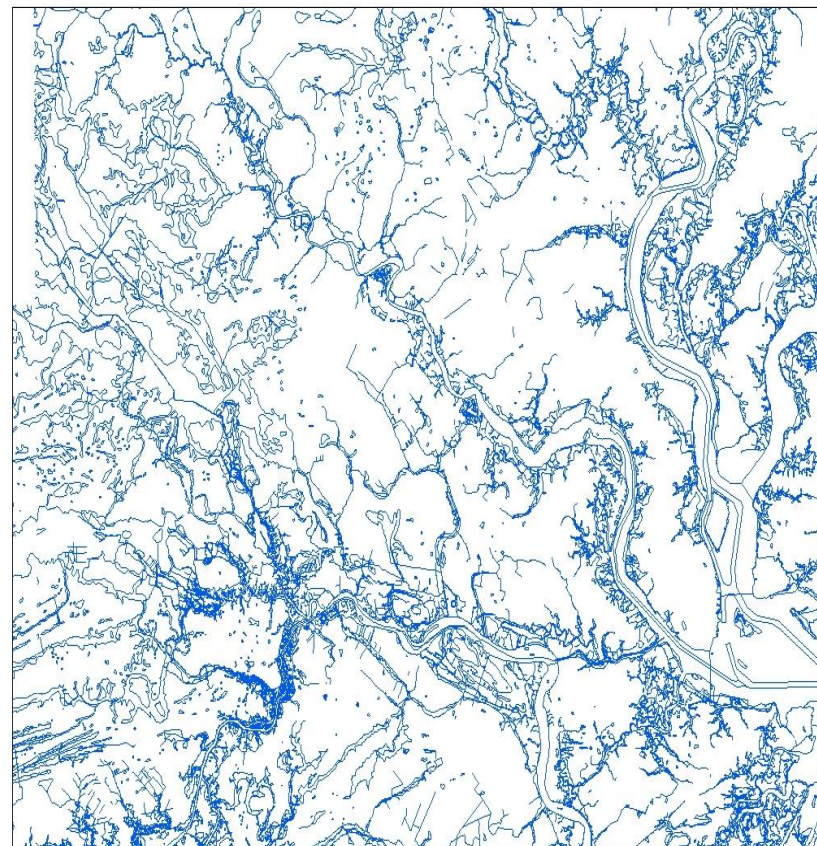
- Site Research / History
- Inspections
- Routine Maintenance
- Major Maintenance

This file should be maintained so that it can be passed on.



## *Potential sources of information*

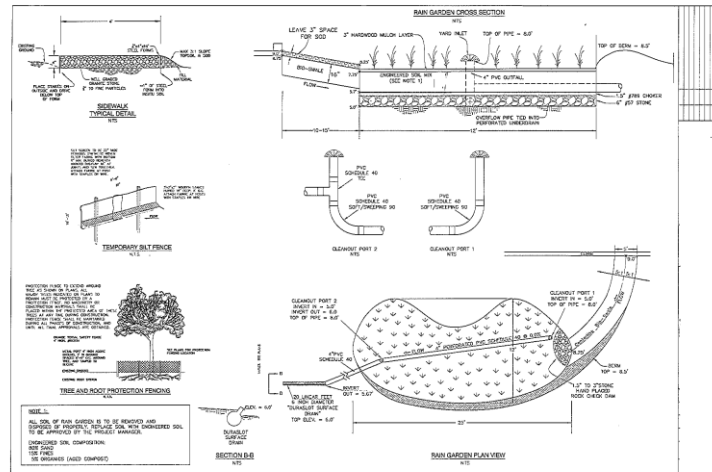
- Property owners
- Adjacent property owners
- Local government
- Regulatory agencies
- Engineers
- Contractors
- Internet (GIS information)





## Types of information

- Plats
- Construction Drawings (as-built)
- Maintenance plans
- Manufactures information
- Date of construction
- Maintenance history



## *What drains to the pond*

- Residential Lots
- Type of flow
  - Sheet flow
  - Piped
- Adjacent Properties
- Urban
- Suburban
- Rural





## Stormwater Pond Identification Sheet

**Pond ID:** \_\_\_\_\_

(ex. P-01, P-02, etc)

**Location:** \_\_\_\_\_

(ex. Intersection of x and y, or at neighborhood entrance, etc...)

**Dimensions:**

Acreage: \_\_\_\_\_

Surface Area: \_\_\_\_\_

Design Volume: \_\_\_\_\_

**Date of Construction:** \_\_\_\_\_

**Aeration Device:**

Brand/Make/Model number: \_\_\_\_\_

**Access points/Maintenance Rights of Way:**

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**Permitted activities in pond:** *ex. swimming, fishing...*

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**Prohibited activities in pond:** *ex. swimming, fishing...*

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**Receiving waterbody: (names of waterways receiving pond overflow)**

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*Roughly sketch your pond and label the locations of the inflow and outflow structures and maintenance rights of way with latitude and longitude coordinates :*

# of Inflow Structures: \_\_\_\_\_

# of Outflow Structures: \_\_\_\_\_





## Stormwater Pond Maintenance Log

Use this sheet to track maintenance concerns and any corrective actions taken.

**Pond ID:** \_\_\_\_\_  
(Refer to Pond Identification Sheet)

**Date:** \_\_\_\_\_

### Maintenance Concern:

Algae  
 Shoreline Erosion  
 Water Quality  
 Sedimentation  
 Nuisance Wildlife (specify): \_\_\_\_\_

Low or High Water Levels  
 Muddy Water  
 Surface Films and Slimes  
 Fish Kills  
 Other (specify): \_\_\_\_\_

**Event Description:** (What caused you to call for service? Include season, temperature, and other details of when problem originated.)

**Remediation/Maintenance Activity Performed and by Whom:**

**Cost of Remediation/Maintenance:**

**Follow Up Services or Recommendations:** (Include name of board member/resident responsible for follow-up)



## *Pay attention to detail*



Something does not look right



At first glance a decent looking outlet control structure



The outlet pipe was not grouted into the control structure

*Your report is the means of conveying the results of the inspection*

*Your report needs to be accurate, clear, concise, and understandable*



## Example

“Control structure failed inspection”

or

“The outfall structure is non-functional. The outlet pipe is not grouted to the structure. This is a major deficiency.”



















## *Planning your field inspection*

- Let others know your daily plans and schedule
- Address hazardous conditions (work in pairs)
- Know the weather conditions
  - Today (current conditions and forecast)
  - Prior week conditions
  - Seasonal conditions
- Know how seasonal conditions affect the Pond (winter, spring, summer, fall)



## *Access/restrictions*

- Notifications
  - Letters
  - Phone calls
- Be visible (wear safety vest)
- Terrain (slopes, water, highways)
- Fencing
- Security
- Permissions
- Special requirements (boat, ATVs)





# LOOK BOTH UPSTREAM AND DOWNSTREAM





















## MAJOR MAINTENANCE





















## *Site documentation*

- All documents should have identification information
- Document specifics of the inspection
  - Persons present
  - Day, date, and time
  - Location
  - Weather
- Take pictures (date stamping helps)
- Utilize checklist

## *Field notes*

- Take notes while in the field
- Use common terms
- Plan your field route
- Review your notes prior to leaving the site (do **NOT** wait until later!)
- Hazardous conditions should be addressed immediately



## *The primary issues*



- Are the Ponds performing as designed?
- Are they being maintained?
- Are the receiving water bodies being protected?

## *KEEP THE INFORMATION FOR THE NEXT POND MANAGER*

- General site information
- Inspection information (date, time, weather conditions)
- Inspection findings
- Field information (notes, checklist, and photos)
- Evaluations
- Inspector information





## Chuck Jarman, P.E.

Water Resources Engineer,  
Clemson Extension Service

Belle W. Baruch Institute of Coastal  
Ecology and Forest Science

P.O. Box 596

Georgetown, SC 29442

(843) 412-1222

[cjarman@clemson.edu](mailto:cjarman@clemson.edu)

THANK YOU!  
FOR YOUR TIME

